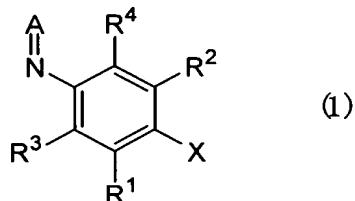


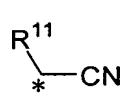
AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A hair dye composition comprising a dissociative direct dye represented by the following formula (1) or a salt thereof:

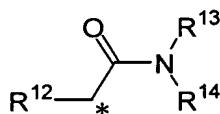


wherein, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> each independently represents a hydrogen atom or a substituent, X represents a hydroxyl group or -NHSO<sub>2</sub>R<sup>5</sup>, in which R<sup>5</sup> represents an alkyl, aryl or heterocyclic group, A represents a group represented by any one of the below-described formulae which group may have one or more substituents:

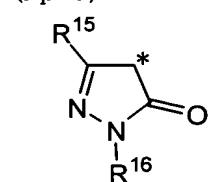
(C p-1)



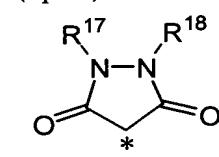
(C p-2)



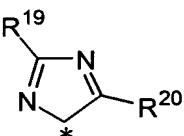
(C p-3)



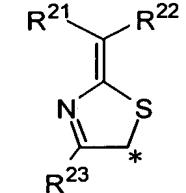
(C p-4)



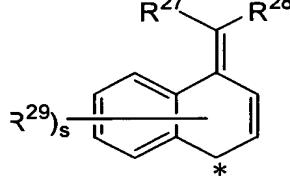
(C p-5)



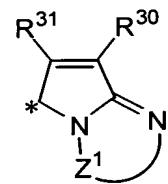
(C p-6)



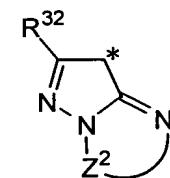
(C p-8)



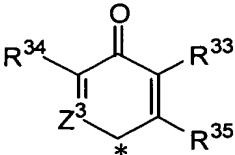
(C p-9)



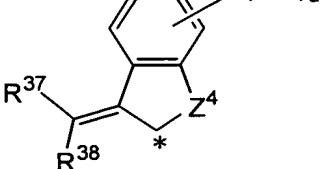
(C p-10)



(C p-11)



(C p-12)



wherein \* is a position bonding to the nitrogen atom in formula (1),

in formula (Cp-1), R<sup>11</sup> represents a cyano, acyl, aryl or heterocyclic group, or - C(R<sup>101</sup>)=C(R<sup>102</sup>)-R<sup>103</sup>, in which R<sup>101</sup>, R<sup>102</sup> and R<sup>103</sup> each independently represents a hydrogen atom or a substituent with the proviso that at least one of R<sup>102</sup> and R<sup>103</sup> is an electron attractive group having a Hammett  $\sigma_p$  value of 0.1 or greater,

in formula (Cp-2), R<sup>12</sup> represents a cyano, alkoxy carbonyl, carbamoyl, aryl or heterocyclic group, and R<sup>13</sup> and R<sup>14</sup> each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-3), R<sup>15</sup> represents a hydrogen atom or an alkyl, aryl, heterocyclic, amino, alkylamino, arylamino, heterocyclic amino, alkoxy, acylamino, alkoxy carbonylamino, ureido, alkoxy carbonyl, carbamoyl or cyano group, and R<sup>16</sup> represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

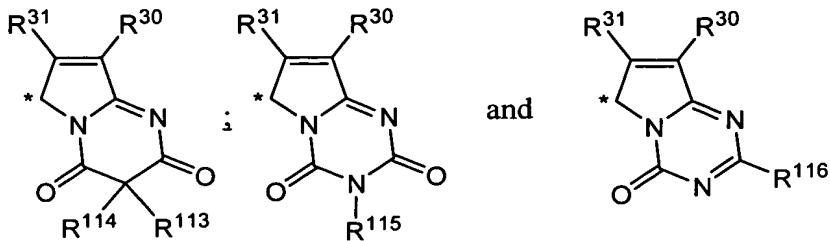
in formula (Cp-4), R<sup>17</sup> and R<sup>18</sup> each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-5), R<sup>19</sup> and R<sup>20</sup> each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-6), R<sup>21</sup> and R<sup>22</sup> each independently represents a cyano, carbamoyl, alkoxy carbonyl, alkylsulfonyl or arylsulfonyl group, and R<sup>23</sup> represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

in formula (Cp-8), R<sup>27</sup> and R<sup>28</sup> each independently represents a cyano, carbamoyl, alkoxy carbonyl, alkylsulfonyl or arylsulfonyl group, R<sup>29</sup> represents a substituent, and s stands for an integer of from 0 to 6,

in formula (Cp-9), R<sup>30</sup> and R<sup>31</sup> each independently represents a hydrogen atom or a substituent, and Z<sup>1</sup> represents an atomic group necessary for the formation of a 6-membered ring together with N-C=N, resulting in a ring system selected from the group consisting of:



wherein R<sup>113</sup> and R<sup>114</sup> each independently represents a hydrogen atom or an alkyl group, R<sup>115</sup> represents a hydrogen atom or an alkyl group, and R<sup>116</sup> represents a hydrogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio, or arylthio group,

in formula (Cp-10), R<sup>32</sup> represents a hydrogen atom or a substituent, and Z<sup>2</sup> represents an atomic group necessary for the formation of a 6-membered ring together with N-C=N,

in formula (Cp-11), R<sup>33</sup>, R<sup>34</sup> and R<sup>35</sup> each independently represents a hydrogen atom or a substituent, Z<sup>3</sup> represents a nitrogen atom or -C(R<sup>36</sup>)=, in which R<sup>36</sup> represents a hydrogen atom or a substituent, with the proviso that when Z<sup>3</sup> represents -C(R<sup>36</sup>)=, R<sup>34</sup> and R<sup>36</sup> may be coupled to form a 5-membered or 6-membered ring, and

in formula (Cp-12), R<sup>37</sup> and R<sup>38</sup> each independently represents a cyano, carbamoyl, alkoxycarbonyl, alkylsulfonyl or arylsulfonyl group, R<sup>39</sup> represents a hydrogen atom or a substituent, u stands for an integer of from 0 to 4 and Z<sup>4</sup> represents -SO<sub>2</sub>- or -SO.

Claim 2 (Currently Amended): A The hair dye composition of Claim 1, wherein R<sup>1</sup> and R<sup>2</sup> of the dissociative direct dye (1) are each a hydrogen or halogen atom, or an alkyl, cyano, acylamino, ureido, alkoxycarbonylamino, aryloxycarbonylamino, sulfamoylamino, alkylsulfonylamino, arylsulfonylamino, alkoxycarbonyl, sulfamoyl or carbamoyl group which may be substituted.

Claim 3 (Currently Amended): A The hair dye composition of Claim 1, wherein R<sup>3</sup> and R<sup>4</sup> of the dissociative direct dye (1) are each a hydrogen atom, a halogen atom, or an alkyl or acylamino group which may be substituted.

Claim 4 (Currently Amended): A The hair dye composition of Claim 1, wherein X of the dissociative direct dye (1) is a hydroxyl group or -NHSO<sub>2</sub>R<sup>5</sup>, and R<sup>5</sup> is an alkyl group which may be substituted.

Claim 5 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group, which may have one or more substituents, selected from the group consisting of:

formula (Cp-1) in which R<sup>11</sup> is a cyano group, acyl group, heterocyclic group or group -C(R<sup>101</sup>)=C(R<sup>102</sup>)-R<sup>103</sup>,

formula (Cp-2) in which R<sup>12</sup> is a cyano group, aryl group or heterocyclic group and R<sup>13</sup> and R<sup>14</sup> are each a hydrogen atom, alkyl group or aryl group, with the proviso that at least one of R<sup>13</sup> and R<sup>14</sup> represents a hydrogen atom,

formula (Cp-3) in which R<sup>15</sup> is an alkyl, amino, alkylamino, arylamino, heterocyclic amino, alkoxy, acylamino, alkoxycarbonylamino, ureido, alkoxycarbonyl, carbamoyl or cyano group, and R<sup>16</sup> is an aryl or heterocyclic group,

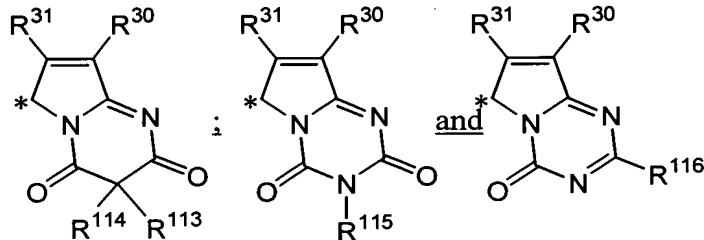
formula (Cp-4) in which R<sup>17</sup> and R<sup>18</sup> are each an alkyl or aryl group,

formula (Cp-5) in which R<sup>19</sup> and R<sup>20</sup> are each an aryl or heterocyclic group,

formula (Cp-6) in which R<sup>21</sup> and R<sup>22</sup> are each a cyano, carbamoyl or alkoxycarbonyl and R<sup>23</sup> is a hydrogen atom or an alkyl group,

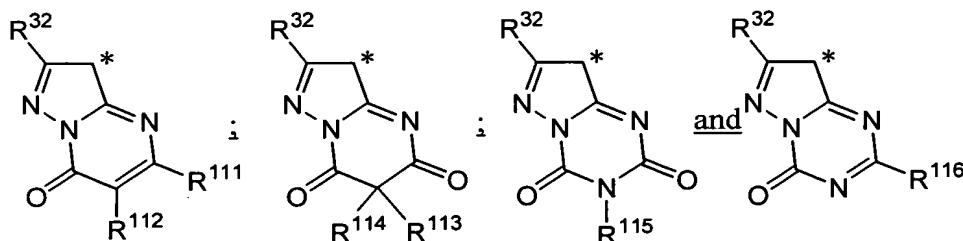
formula (Cp-8) in which R<sup>27</sup> and R<sup>28</sup> are each a cyano, carbamoyl or alkoxy carbonyl group, R<sup>29</sup> is a halogen atom or an acylamino, alkylsulfonylamino, arylsulfonylamino, alkoxy carbonyl, carbamoyl, alkylsulfonyl or arylsulfonyl group, and s is an integer of from 0 to 2,

formula (Cp-9) in which R<sup>30</sup> and R<sup>31</sup> are each a hydrogen atom or an alkyl, aryl, heterocyclic, alkoxy carbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl or cyano group and Z<sup>1</sup> represents an atomic group necessary for the formation of a 6-membered ring together with N-C=N, resulting in a ring system selected from the group consisting of:



in which, R<sup>113</sup> and R<sup>114</sup> each independently represents a hydrogen atom or an alkyl group, R<sup>115</sup> represents a hydrogen atom or an alkyl group, and R<sup>116</sup> represents a hydrogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxy carbonylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio, or arylthio group,

formula (Cp-10) in which R<sup>32</sup> is a hydrogen atom or an alkyl, aryl, heterocyclic, alkoxy carbonyl, carbamoyl, alkylsulfonyl, arylsulfonyl or cyano group, and Z<sup>2</sup> is a group capable of forming the following ring systems:



in which, R<sup>111</sup> represents a hydrogen atom or an alkoxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, aryloxycarbonylamino, sulfamoylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio, arylthio or heterocyclic thio group, R<sup>112</sup> represents a hydrogen or halogen atom, or an alkyl, acyl, carbamoyl or alkoxycarbonyl group, R<sup>113</sup> and R<sup>114</sup> each independently represents a hydrogen atom or an alkyl group, R<sup>115</sup> represents a hydrogen atom or an alkyl group, and R<sup>116</sup> represents a hydrogen atom or an alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, alkylsulfonylamino, arylsulfonylamino, alkylthio, or arylthio group,

formula (Cp-11) in which Z<sup>3</sup> is -C(R<sup>36</sup>)=, R<sup>36</sup> representing a hydrogen atom or an acylamino group, R<sup>33</sup> and R<sup>34</sup> are each a hydrogen atom, a halogen atom, an alkyl group or acylamino group, and R<sup>35</sup> is a hydrogen atom or an alkyl group; or in which Z<sup>3</sup> is -C(R<sup>36</sup>)=, R<sup>34</sup> and R<sup>36</sup> are coupled together to form a benzene ring which may be substituted with a halogen atom or an amino, alkylamino, arylamino, heterocyclic amino, acylamino, ureido, alkoxycarbonylamino, alkylsulfonylamino or arylsulfonylamino group, R<sup>33</sup> represents an acylamino, alkylsulfonylamino, arylsulfonylamino, carbamoyl or sulfamoyl group, and R<sup>35</sup> represents a hydrogen atom, and

formula (Cp-12) in which R<sup>37</sup> and R<sup>38</sup> are a cyano or alkoxycarbonyl group, R<sup>39</sup> is a halogen atom or an acylamino, alkylsulfonylamino, arylsulfonylamino, alkoxycarbonyl, carbamoyl, alkylsulfonyl or arylsulfonyl group, u is an integer of from 0 to 2, and Z<sup>4</sup> is -SO<sub>2</sub>-.

Claim 6 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group represented by formula selected from the group consisting of (Cp-1), (Cp-2), (Cp-3), (Cp-4), (Cp-9), and (Cp-11).

Claim 7 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group represented by formula (Cp-1), R<sup>11</sup> represents a cyano, acyl, aryl or heterocyclic group, or -C(R<sup>101</sup>)=C(R<sup>102</sup>)-R<sup>103</sup>, in which R<sup>101</sup>, R<sup>102</sup> and R<sup>103</sup> each independently represents a hydrogen atom or a substituent with the proviso that at least one of R<sup>102</sup> and R<sup>103</sup> is an electron attractive group having a Hammett  $\sigma$  value of 0.1 or greater,

Claim 8 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group represented by formula (Cp-2), R<sup>12</sup> represents a cyano, alkoxycarbonyl, carbamoyl, aryl or heterocyclic group, and R<sup>13</sup> and R<sup>14</sup> each independently represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

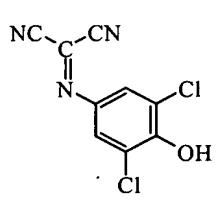
Claim 9 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group represented by formula (Cp-3), R<sup>15</sup> represents a hydrogen atom or an alkyl, aryl, heterocyclic, amino, alkylamino, arylamino, heterocyclic amino, alkoxy, acylamino, alkoxycarbonylamino, ureido, alkoxycarbonyl, carbamoyl or cyano group, and R<sup>16</sup> represents a hydrogen atom or an alkyl, aryl or heterocyclic group,

Claim 10 (Currently Amended): A The hair dye composition of Claim 1, wherein A of the dissociative direct dye (1) is a group represented by formula (Cp-11), R<sup>33</sup>, R<sup>34</sup> and R<sup>35</sup> each independently represents a hydrogen atom or a substituent, Z<sup>3</sup> represents a nitrogen atom or -C(R<sup>36</sup>)=, in which R<sup>36</sup> represents a hydrogen atom or a substituent, with the proviso

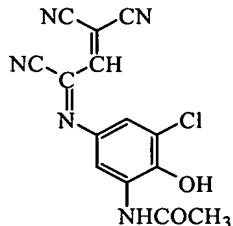
that when  $Z^3$  represents  $-C(R^{36})=$ ,  $R^{34}$  and  $R^{36}$  may be coupled to form a 5-membered or 6-membered ring.

Claim 11 (Currently Amended): A The hair dye composition of Claim 1, wherein said direct dye represented by formula (1) is selected from the group consisting of:

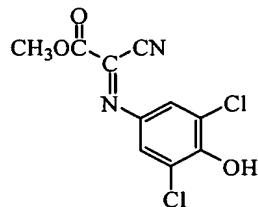
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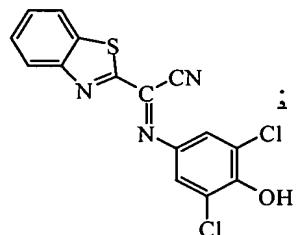
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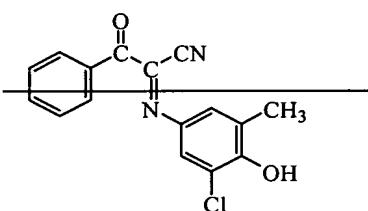
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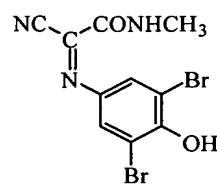
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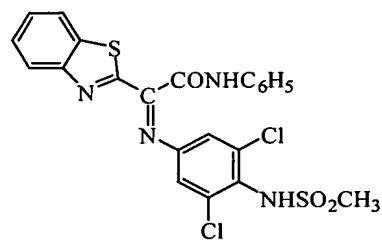
~~D-5~~



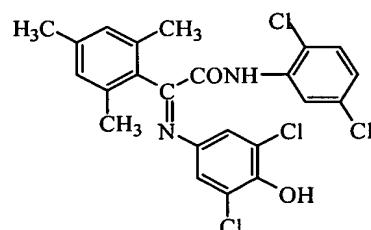
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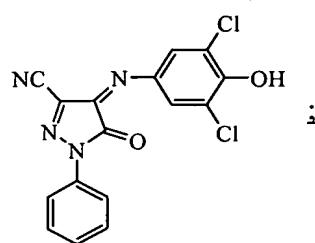
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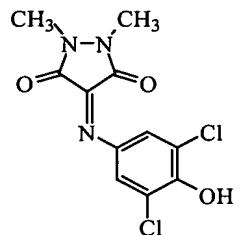
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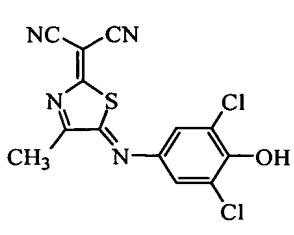
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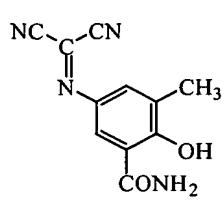
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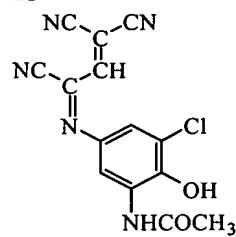
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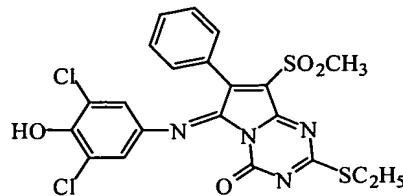
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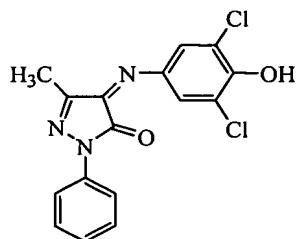
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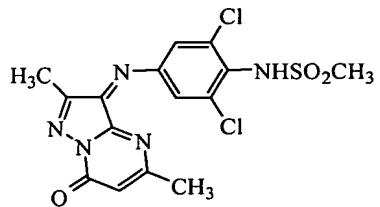
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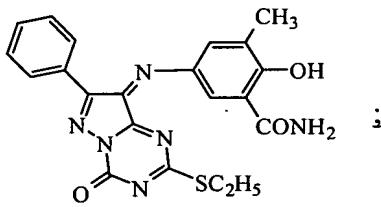
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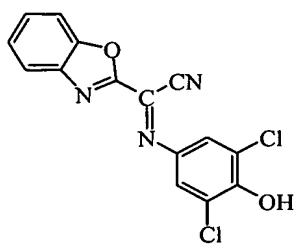
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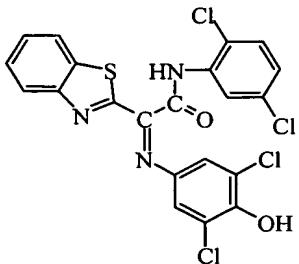
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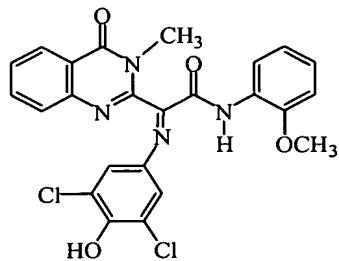
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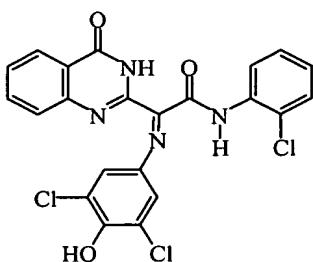
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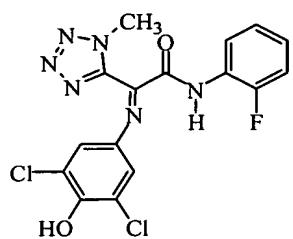
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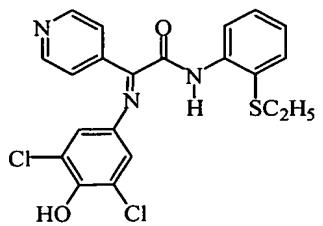
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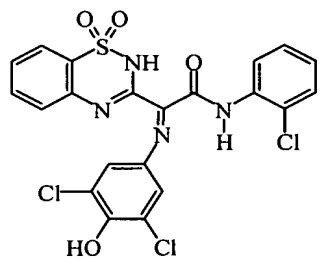
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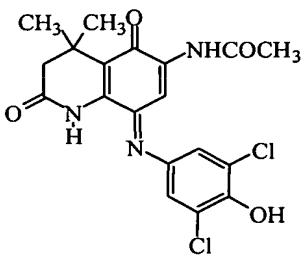
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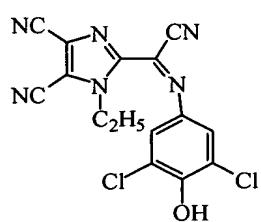
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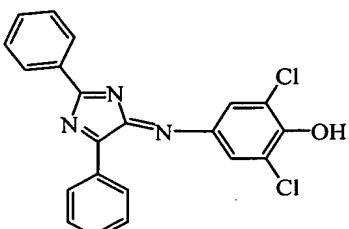
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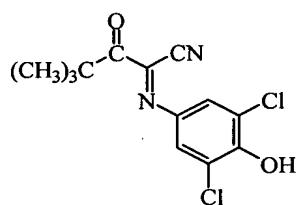
D-29



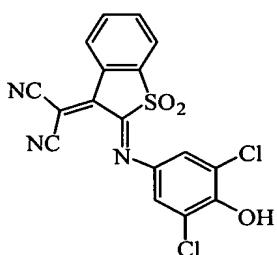
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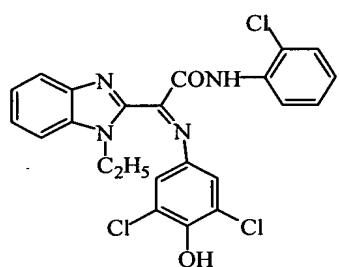
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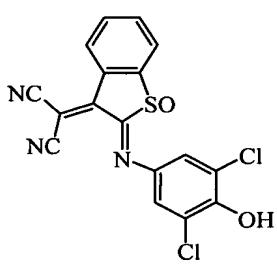
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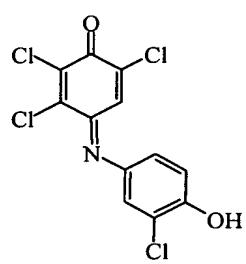
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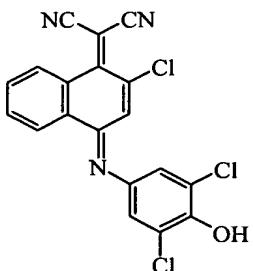
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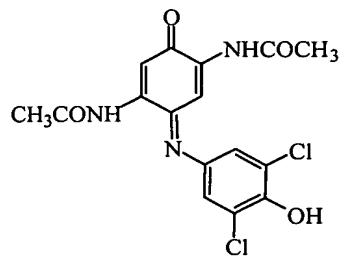
D-35



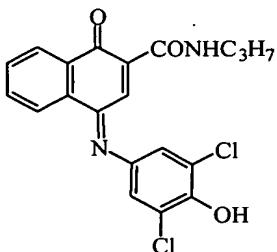
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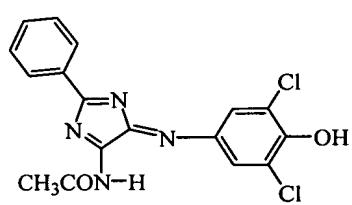
D-37



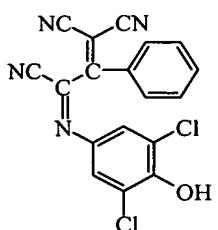
D-38



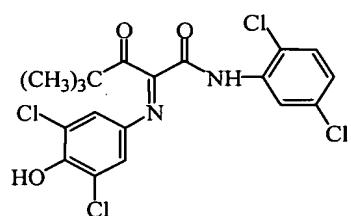
D-39



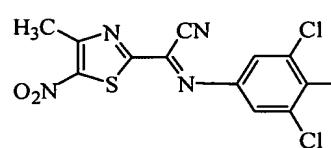
D-40



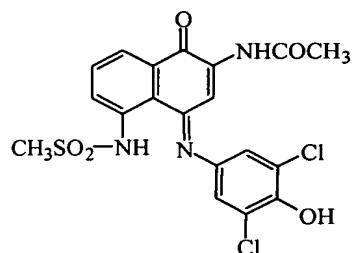
D-41



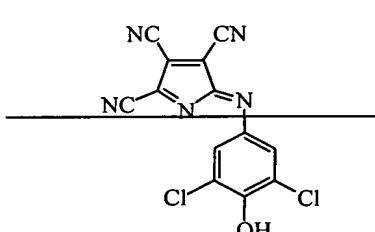
D-42



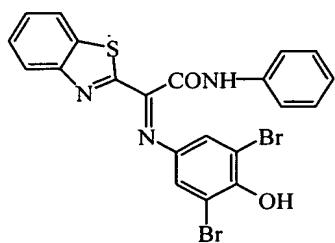
D-43



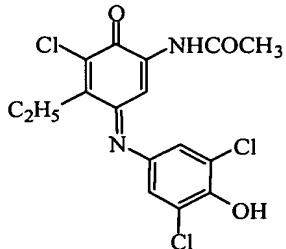
D-44



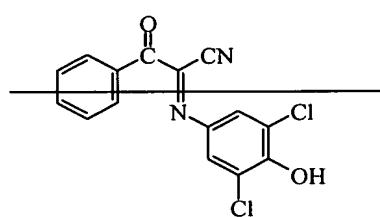
D-45



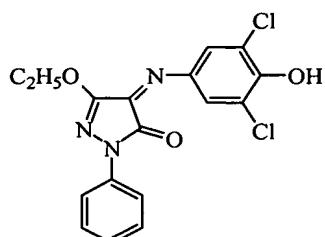
D-46



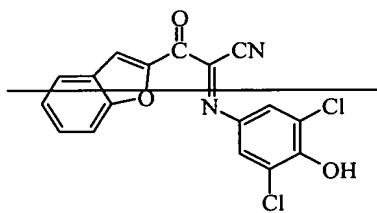
—D-47—



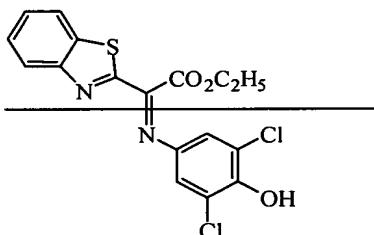
D-48



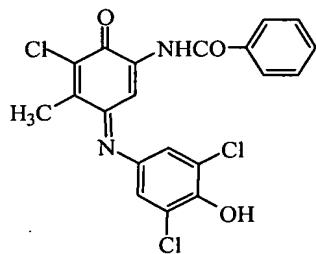
—D-48—



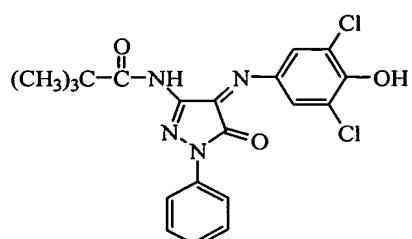
—D-49—



D-50



D-51



and

Claim 12 (Currently Amended): A The hair dye composition of Claim 1, further comprising at least one direct dye or oxidation dye.

Claim 13 (Currently Amended): A The hair dye composition of Claim 12, wherein the total amount of said dissociative direct dye and said at least one direct dye ranges from 0.001 to 20 wt.% based on the whole composition.

Claim 14 (Currently Amended): A The hair dye composition of Claim 1, wherein the pKa of said dissociative direct dye ranges from 1.5 to 9.

Claim 15 (Currently Amended): A The hair dye composition of Claim 1, wherein the amount of said dissociative direct dye ranges from 0.001 to 20 wt.% based on the whole composition.

Claim 16 (Currently Amended): A The hair dye composition of Claim 1, further comprising at least one additional component selected from the group consisting of an alkali agent, an oxidizing agent, a developer, a coupler, an oxidation dye, an autooxidation dye, a direct dye, a polyol, a polyol alkyl ether, a cationic polymer, an amphoteric polymer, a silicone, a hydrocarbon, an animal fat or oil, a vegetable fat or oil, a higher fatty acid, an organic solvent, a penetration promoter, a cationic surfactant, a natural polymer, a synthetic polymer, a higher alcohol, an ether, an amphoteric surfactant, a nonionic surfactant, an anionic surfactant, a protein derivative, an amino acid, an antiseptic, a chelating agent, a stabilizer, an antioxidant, a plant extract, a crude drug extract, a vitamin, a colorant, a perfume, and an ultraviolet absorber.

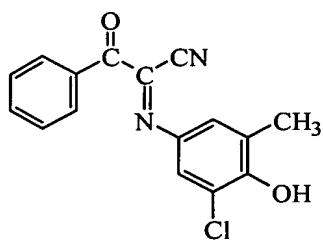
Claim 17 (Currently Amended): A The hair dye composition of Claim 1, wherein said hair dye composition is in a form selected from the group consisting of a powder, a transparent liquid, an emulsion, a cream, a gel, a paste, an aerosol, and an aerosol foam.

Claim 18 (Currently Amended): A method of dying hair, comprising applying to the hair of a subject in need thereof the hair dye composition of Claim 1 ~~to the hair of a subject;~~

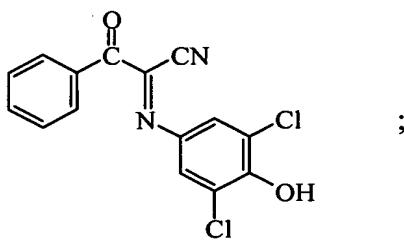
reacting said hair dye composition with said hair ~~of said subject~~; and removing said hair dye composition from said hair ~~of said subject~~.

Claim 19 (New): A hair dye composition comprising a dissociative direct dye selected from the group consisting of

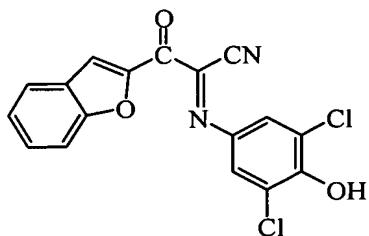
D-5



D-47

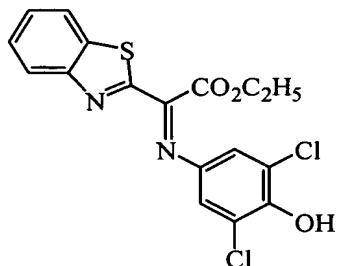


D-52



D-49

and



or a salt

thereof.

Claim 20 (New): The hair dye composition of Claim 19, further comprising at least one direct dye or oxidation dye.

Claim 21 (New): The hair dye composition of Claim 20, wherein the total amount of said dissociative direct dye and said at least one direct dye ranges from 0.001 to 20 wt.% based on the whole composition.

Claim 22 (New): The hair dye composition of Claim 19, wherein the pKa of said dissociative direct dye ranges from 1.5 to 9.

Claim 23 (New): The hair dye composition of Claim 19, wherein the amount of said dissociative direct dye ranges from 0.001 to 20 wt.% based on the whole composition.

Claim 24 (New): The hair dye composition of Claim 19, further comprising at least one additional component selected from the group consisting of an alkali agent, an oxidizing agent, a developer, a coupler, an oxidation dye, an autooxidation dye, a direct dye, a polyol, a

polyol alkyl ether, a cationic polymer, an amphoteric polymer, a silicone, a hydrocarbon, an animal fat or oil, a vegetable fat or oil, a higher fatty acid, an organic solvent, a penetration promoter, a cationic surfactant, a natural polymer, a synthetic polymer, a higher alcohol, an ether, an amphoteric surfactant, a nonionic surfactant, an anionic surfactant, a protein derivative, an amino acid, an antiseptic, a chelating agent, a stabilizer, an antioxidant, a plant extract, a crude drug extract, a vitamin, a colorant, a perfume, and an ultraviolet absorber.

Claim 25 (New): The hair dye composition of Claim 19, wherein said hair dye composition is in a form selected from the group consisting of a powder, a transparent liquid, an emulsion, a cream, a gel, a paste, an aerosol, and an aerosol foam.

Claim 26 (New): A method of dying hair, comprising applying to the hair of a subject in need thereof the hair dye composition of Claim 19; reacting said hair dye composition with said hair; and removing said hair dye composition from said hair.

SUPPORT FOR THE AMENDMENTS

Claims 1-18 have been amended.

Claims 19-26 have been added.

The amendment of Claims 1-18 is supported by originally filed Claims 1-16 and the specification as originally filed. Further, support for new Claims 19-26 is provided by the originally filed claims and specification, for example page 26.

Applicants wish to make special note that the second occurrence of D-48 appearing in previously pending Claim 11 and on page 26 of the specification has been amended to avoid unnecessary and confusing duplicity in naming convention. Specifically, the second occurrence of D-48 has been replaced with D-52.

No new matter has been added by the present amendment.